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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/383,340	08/25/1999	STEVEN KLEIMAN	NAP-010	6451

22883 7590 10/06/2004
SWERNOFSKY LAW GROUP PC
P.O. BOX 390013
MOUNTAIN VIEW, CA 94039-0013

EXAMINER

DINH, DUNG C

ART UNIT PAPER NUMBER

2152

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/383,340

Applicant(s)

KLEIMAN, STEVEN

Examiner

Dung Dinh

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23,24,26-36,38-48 and 50-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23,24,26-36,38-48 and 50-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/19/2004 has been entered.

Response to Arguments

Applicant's amendment and arguments filed 8/19/2004 have been fully considered and are persuasive to overcome *Menon*. However, in reviewing the specification and the prior art of record, the examiner determined that the current claims do not overcome the teaching of *Hemphill*, a prior art used in previous office action (10/22/2002).

The specification discloses the 'file server' is really a logical entity comprises of two real (and separate) servers connected to a common storage set. (See specification page 7 lines 6-10).

Hemphill teaches connecting two servers (fig.1 server 100 and server 200) together such that each can control the storage

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102 and 202. Since storage 102 and 202 controllable by any of the servers 100 and 200, storage 102 and storage 202 can be interpreted to be elements of a common storage set of storage elements as claimed. The whole system (servers 100 and 200 together with storage elements 102 and 202 as shown in Hemphill fig.1) functionally form a file server as claimed with the server 100 and 200 being nodes in the file server with access to a common storage set of storage elements (storage 102 and 202).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 23-24, 26-29, 34-36, 38-41, 46-48, 50-53, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hemphill US patent 5,781,716 in view of Official notice.

As per claim 23, Hemphill teaches a file server [the combination elements shown in fig 1] including

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a common set of storage elements [fig.1 disk subsystems 102 and 202];

at least a pair of nodes (nodes 100 and 200) disposed in said file server, each node being connected to said common set of storage elements and includes a processor and memory (inherent) so as to capable of processing file server commands for said common set of storage elements [col.5 lines 3-12];

at least one inter-node connectivity element [fig.1 Network N] coupled to said nodes; and

a connection for coupling said file server commands to said nodes [via Network N].

Hemphill does not specifically disclose communicate with other nodes in another file server. Hemphill's fig.1 shows only one pair of nodes. However, it is apparent nodes 100 and 102 are merely representative to describe Hemphill's invention. In actual usage it is apparent that there would be other file server pairs connected to the network. Official notice is taken that it is well known in the art for an organization to have multiple file servers on a network for providing various applications or services. Hence, it would have been obvious for one of ordinary skill in the art to provide another set of file server connected to network N of Hemphill because it would have

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enabled the system to provide more services and/or expand storage capacity.

As per claim 24, Hemphill teaches the pair of nodes are disposed to failover to each other [col.5 lines 2-12].

As per claim 26, Hemphill teaches each of the storage elements corresponds to one node of said pair (storage 102 to node 100, and storage 202 to node 200); each of the storage element is connected to both nodes of said pair (via connections 114, 118, 214 and 218. See fig.1); whereby both nodes are equally capable of controlling said storage elements (col. 5 lines 2-12].

As per claim 27, Hemphill does not specifically disclose usage of NUMA network. A NUMA network is the state wherein a system has both DMA and remote memory access. Official notice is taken to the known usage of a NUMA network. It would have been obvious for one of ordinary skill in the art to provide the system of Hemphill with NUMA network because it would have enable both direct and remote memory access to the system of Hemphill, thereby having provided efficient means for access to the system.

As per claim 28, Hemphill system is inherently capable of scaling by coupling to another pair of nodes in another file server via the network N.

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As per claim 29, Hemphill teaches the storage elements being RAID storage system [col.11 line 61 "disk array"] .

As per claim 34, Hemphill teaches the a first node control the storage element in response to file server commands pair while the second node does not [See col.2 lines 20-31. Since each nodes provides services independently, it is apparent that command directed to one node would not be acted upon by the second node] .

As per claims 35-41 and 46, they are rejected under similar rationales as for claims 23-29 and 34 above.

As per claims 47-53 and 58, they are rejected under similar rationales as for claims 23-29 and 34 above.

Claims 30-33, 42-45, and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hemphill US patent 5,781,716 as stated above and in further view Brown et al. US patent 6,148,414.

As per claims 30-31, Hemphill does not teach execute command at a first node and store a copy the command at the second node and vise versa when a command is directed at the second node. In similar field of invention, Brown teaches a system with multiple server nodes sharing control to a common storage set (see fig.1). Brown teaches to send replicate of server command to another node so as to enable the other node to

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take over the operation and maintain data reliability and coherency when the node performing the command failed (see abstract, col.2 lines 15-25). Hence, It would have been obvious for one of ordinary skill in the art to have one node record the command received by the other node because it would have enable a failover node to complete the operation of a failed node and maintain data reliability and coherency of the storage system.

As per claims 32-33, 42-45, 54-57, they are rejected under similar rationale stated for claims 30-31 above.

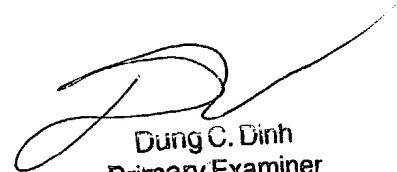
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Dinh whose telephone number is (703) 305-9655. The examiner can normally be reached on Monday-Thursday from 7:00 AM - 4:30 PM. The examiner can also be reached on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached at (703) 305-4792.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dung C. Dinh
Primary Examiner